Crestron **DIN-AP3MEX**
DIN Rail 3-Series® Automation Processor with infiNET EX®
Operations & Installation Guide

CRESTRON®

Regulatory Compliance

This product is Listed to applicable UL Standards and requirements by Underwriters Laboratories Inc.

As of the date of manufacture, the DIN-AP3MEX has been tested and found to comply with specifications for CE marking and standards per EMC and Radiocommunications Compliance Labelling.

Federal Communications Commission (FCC) Compliance Statement

This device complies with part 15 of the FCC Rules. Operation is subject to the following conditions: (1) This device may not cause harmful interference and (2) this device must accept any interference received, including interference that may cause undesired operation.

CAUTION: Changes or modifications not expressly approved by the manufacturer responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help

Regulatory Compliance (Continued)

Industry Canada (IC) Compliance Statement

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

This radio transmitter, IC: 5683C-CWD6660, has been approved by Industry Canada to operate with the antenna types listed below with the maximum permissible gain and required antenna impedance for each antenna type indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

Antenna Type: Dipole, Maximum permissible antenna gain: 2.5 dBi, Impedance: 50 Ohms

Industrie Canada (IC) Déclaration de conformité

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada. Dans le but de réduire les risques de brouillage radioélectrique à l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonnée équivalente (p.i.r.e.) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication satisfaisante.

Le présent émetteur radio , IC: 5683C-CWD6660, a été approuvé par Industrie Canada pour fonctionner avec les types d'antenne énumérés ci-dessous et ayant un gain admissible maximal et l'impédance requise pour chaque type d'antenne. Les types d'antenne non inclus dans cette liste, ou dont le gain est supérieur au gain maximal indiqué, sont strictement interdits pour l'exploitation de l'émetteur.

Type d'antenne: Dipole, Gain admissible maximal: 2.5 dBi, Impédance: 50 Ohms

To satisfy RF exposure requirements, this device and its antenna must operate with a separation distance of at least 20 centimeters from all persons and must not be colocated or operating in conjunction with any other antenna or transmitter.

The specific patents that cover Crestron products are listed at patents.crestron.com.

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DIN Rail 3-Series Automation Processor: DIN-AP3MEX

Introduction

The Crestron® DIN-AP3MEX is a 3-Series Control System® designed for DIN rail mounting applications. Built-in infiNET EX® wireless technology makes the DIN-AP3MEX ideal for all types of lighting, shading, AV, and climate control applications wherever a reliable wireless control solution is preferred. Wired Cresnet® and Ethernet communication are also supported. Featuring the 3-Series® control engine, the DIN-AP3MEX forms the core of any modern networked home or commercial building, managing and integrating all the disparate technologies throughout the facility to make life easier, greener, more productive, and more enjoyable.

Features and Functions

- Next generation control system
- 3-Series Control Engine—substantially faster and more powerful than other control systems
- Exclusive modular programming architecture
- Onboard 256 MB RAM and 2 GB Flash memory
- Memory card slot
- Integrated infiNET EX wireless gateway
- Industry-standard Ethernet and Cresnet wired communications

(Continued on following page)

Features and Functions

(Continued)

- iPhone®, iPad®, Android™, and Samsung Smart TV® control app support
- Crestron Fusion™ Enterprise Management Software support
- SNMP support
- Native BACnet®/IP support[1]
- Installer setup via Crestron Toolbox™ or Internet Explorer®[2]
- Backwards compatible to run existing SIMPL programs
- Full Unicode (multilanguage) support
- Increased network throughput and security
- Secure access though Active Directory integration or standalone account management
- Hardware level security using 802.1x authentication
- IIS v.6.0 web server
- IPv6 ready
- Front panel USB computer console port
- 9M wide DIN rail mountable
- XPanel with Smart Graphics™ computer and web-based control

DIN Rail Mounting

The DIN-AP3MEX is designed to snap onto a standard DIN rail for installation in a wall mount enclosure[3] (Crestron DIN-EN series—sold separately—or similar) or on a wall panel. DIN rail mounting affords a very space-efficient, cost-effective, and modular solution for configuring complete automation systems using the DIN-AP3MEX along with additional Crestron and third-party DIN rail mountable devices.

1. License required. The DIN-AP3MEX supports a maximum of 500 BACnet objects when dedicated for BACnet use only. Actual capabilities are contingent upon the overall program size and complexity.
2. Web-based installer setup requires the Microsoft® Internet Explorer web browser running on a Windows® PC.
3. Use of an Antenna Extender (ANT-EXT—sold separately) is advised when mounting the DIN-AP3MEX in an enclosure.

3-Series Control Systems

Today's commercial buildings and custom homes comprise more technology than ever before, and all these systems need to be networked, managed, and controlled in fundamentally new ways. The IP-based 3-Series platform is engineered from the ground up to deliver a network-grade server appliance capable of faithfully handling everything from lighting and AV system control to total building management.

The 3-Series Control System embodies a distinctively robust, dynamic, and secure platform to elevate the system designs to higher levels of performance and reliability. Compared to other control systems, Crestron 3-Series provides a pronounced increase in processing power and speed with more memory, rock solid networking and IP control, and a unique modular programming architecture.

Modular Programming Architecture

Designed for enhanced scalability, the DIN-AP3MEX affords high-speed, real-time multitasking to seamlessly run multiple programs simultaneously. This exclusive programming architecture lets programmers independently develop and run device-specific programs for lighting, shades, HVAC, security, AV, etc., allowing for the optimization of each program, and allowing changes to be made to one program without affecting the whole. Even as the system grows, processing resources can easily be shifted from one 3-Series processor to another without rewriting any code. The end benefit is dramatically simplified upgradability with minimal downtime, whether implementing changes on site or remotely via the network.

Robust Ethernet and IP Control

IP technology is the heart of the 3-Series, so it should be no surprise that its networking abilities are second to none. High-speed Ethernet connectivity enables integration with IP-controllable devices and allows the DIN-AP3MEX to be part of a larger managed control network. Whether residing on a sensitive corporate LAN, a home network, or accessing the Internet through a cable modem, the DIN-AP3MEX provides secure, reliable interconnectivity with IP-enabled touch screens, computers, mobile devices, video displays, media servers, security systems, lighting, HVAC, and other equipment—whether on premises or across the globe.

Control Apps and XPanel

Years ago, Crestron pioneered the world's first IP-based control system unleashing vast new possibilities for controlling, monitoring, and managing integrated systems over a LAN, WAN, and the Internet. Today, Crestron offers more ways than ever to control the world in any way. Using a computer, smartphone, tablet, or Smart TV, Crestron allows control of anything in the home or workplace from anywhere in the world.

Native to every 3-Series control system, Crestron XPanel technology transforms any laptop or desktop computer into a virtual Crestron touch screen. Crestron control apps deliver the Crestron touch screen experience to iPhone, iPad, and Android devices, allowing safe monitoring and control of the entire residence or commercial facility using the one device that goes everywhere. Even Samsung Smart TV® has a Crestron control app available.

Crestron Fusion Enterprise Management

Crestron Fusion provides an integrated platform for creating truly smart buildings that save energy, enhance worker productivity, and prolong the life-span of valuable equipment. As part of a complete managed network in a corporate enterprise, college campus, convention center or any other facility, the DIN-AP3MEX works integrally with Fusion RV® Remote Asset Management Software to enable remote scheduling, monitoring, and control of rooms and technology from a central help desk. Fusion EM™ Energy Management Software enables organizations to reduce energy consumption by tracking real-time usage and automating control of lighting, shades, and HVAC.

SNMP Support

Built-in SNMP support enables integration with third-party IT management software, allowing network administrators to manage and control Crestron systems on the network in an IT-friendly format.

infiNET EX Wireless Control

Integrated infiNET EX technology provides an extremely easy and cost-effective way to add control of lighting, shades, room temperature, and other functions using our complete line of infiNET EX based wireless

products. Perfect for existing structures and rentals, infiNET EX affords ultra-reliable 2-way wireless communications throughout the home without the need for physical control wiring.

Cresnet

Cresnet provides a dependable network wiring solution for Crestron keypads, lighting controls, thermostats, and other devices that do not require the higher speed of Ethernet or the wireless communication of infiNET EX. The Cresnet bus offers easy wiring and configuration, carrying bidirectional communication and 24 Vdc power to each device over a simple 4-conductor cable. To assist with troubleshooting, the DIN-AP3MEX includes Crestron's patent-pending Network Analyzer which continuously monitors the integrity of the Cresnet network for wiring faults, marginal performance, and other errors.

The DIN-AP3MEX includes a pair of Cresnet master ports (paralleled) capable of supporting approximately 20 typical devices. Larger systems with more than 20 devices can be handled by adding the DIN-HUB Cresnet Distribution Hub (sold separately). Connectivity for multiple homeruns can be facilitated using one or more DIN-BLOCK Cresnet Distribution Blocks (sold separately). Additionally, at least one DIN-PWS50 Cresnet Power Supply (sold separately) is required to power the DIN-AP3MEX and any connected Cresnet devices.

BACnet/IP

Native support for the BACnet/IP communication protocol provides a direct interface to third-party building management systems over Ethernet, simplifying integration with HVAC, security, fire and life safety, voice and data, lighting, shades, and other systems. Using BACnet/IP, each system runs independently with the ability to communicate together on one platform for a truly smart building.*

* License required. The DIN-AP3MEX supports a maximum of 500 BACnet objects when dedicated for BACnet use only. Actual capabilities are contingent upon the overall program size and complexity.

Specifications

Specifications for the DIN-AP3MEX are listed in the following table.

DIN-AP3MEX Specifications

SPECIFICATION	DETAILS
Control Engine	3-Series; real-time, preemptive multi-threaded/multitasking kernel; Transaction-Safe Extended FAT file system; supports up to 10 simultaneously running programs
Memory	
DDR3 SDRAM	256 MB
Flash	2 GB
Memory Card	Supports SD™ and SDHC™ cards up to 32 GB (not supplied)
Wired Communications	
Ethernet	10/100 Mbps; auto-switching; auto-negotiating; auto-discovery; full/half duplex; industry-standard TCP/IP stack; UDP/IP; CIP; DHCP; SSL; IEEE 802.1X; SNMP; BACnet/IP;[1] IPv4 or IPv6; Active Directory authentication; IIS v.6.0 web server; SMTP email client; installer setup via Crestron Toolbox or MSIE[2]
Cresnet	Cresnet master mode
USB	Supports computer console via front panel USB 2.0 device port

(Continued on following page)

DIN-AP3MEX Specifications (Continued)

SPECIFICATION	DETAILS
Wireless Communications	
RF Transceiver	infiNET EX 2-way RF, 2.4 GHz ISM Channels 11–26 (2400 to 2483.5 MHz), default channel 15; IEEE 802.15.4 compliant
Range (typical)	150 feet (46 meters) indoor, 250 feet (77 meters) outdoor, subject to site-specific conditions[3]
Device Support	Maximum 100 infiNET EX devices (inclusive of a total of 6 MTX-3 or MLX-3 remotes) and 5 infiNET EX expanders (model CLW-EXPEX or GLA-EXPEX)
Power Requirements	
Cresnet Power Usage	8 watts (0.33 amps @ 24 volts dc)
Default Net ID	02
Environmental	
Installation Location	Indoor use only
Temperature	32º to 104º F (0º to 40º C)
Humidity	10% to 90% RH (non-condensing)
Heat Dissipation	26 Btu/h
Enclosure	Light gray polycarbonate housing with polycarbonate label overlay, UL94 V-0 rated, 35 mm DIN EN 60715 rail mount, DIN 43880 form factor for enclosures with 45 mm front panel cutout, occupies 9 DIN module spaces (162 mm)

(Continued on following page)

DIN-AP3MEX Specifications (Continued)

SPECIFICATION	DETAILS
Dimensions	
Height	3.72 in (95 mm)
Width	6.28 in (160 mm)
Depth	2.29 in (59 mm)
Weight	10 oz (277 kg)
Available Accessories	
3-Series BACnet/IP Support	3-Series Native BACnet/IP License
ANT-EXT	Antenna Extender
CLW-EXPEX	infiNET EX Wireless Expander
Crestron App	Control App for Apple® iOS®
Crestron Mobile Pro®	Control App for iPhone, iPad, and Android Devices
Crestron App for Samsung Smart TV	Control App for Samsung Smart TV
CSP-LIR-USB	IR Learner
DIN-EN	Enclosures for DIN Rail Devices
DIN-Series	DIN Rail Modules
Fusion EM	Energy Management Software
Fusion RV	Remote Asset Management Software
GLA-EXPEX	Crestron Green Light® Wireless Expander for infiNET EX Networks

(Continued on following page)

DIN-AP3MEX Specifications (Continued)

SPECIFICATION	DETAILS
Available Accessories (Continued)	
INET-IOEX-IRCOM	infiNET EX Wireless IR/RS-232 Control Module
INET-IOEX-RYIO	infiNET EX Wireless Relay/Digital Input Control Module
myCRESTRON	Dynamic DNS Service for Crestron systems
RoomView® Express	Remote Help Desk and Resource Management Software
XPANEL	Crestron Control® for Computers

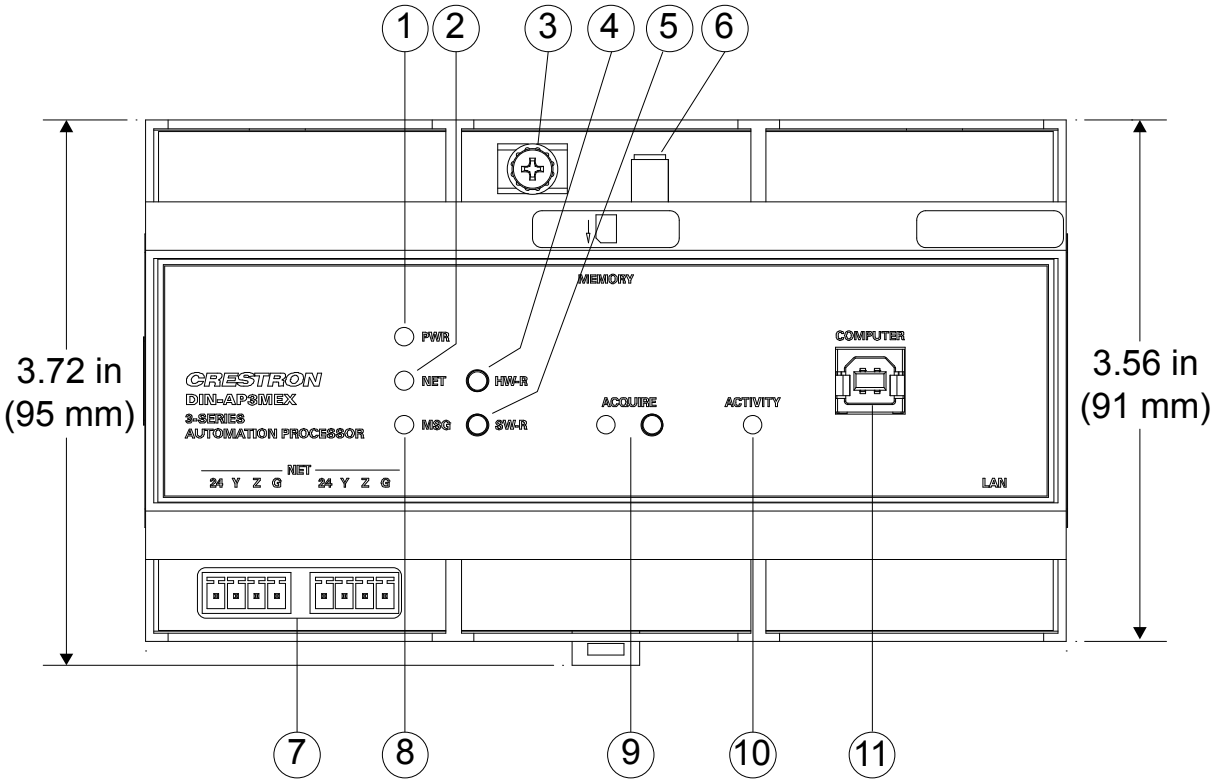
1. License required. The DIN-AP3MEX support a maximum of 500 BACnet objects when dedicated for BACnet use only. Actual capabilities are contingent upon the overall program size and complexity
2. Web-based installer setup requires the Microsoft Internet Explorer web browser running on a Windows PC.
3. The effective range of the entire wireless network is extended based on the placement and capabilities of each network device. Consult the specifications for each wireless network device to verify wireless capabilities and limitations.

Physical Description

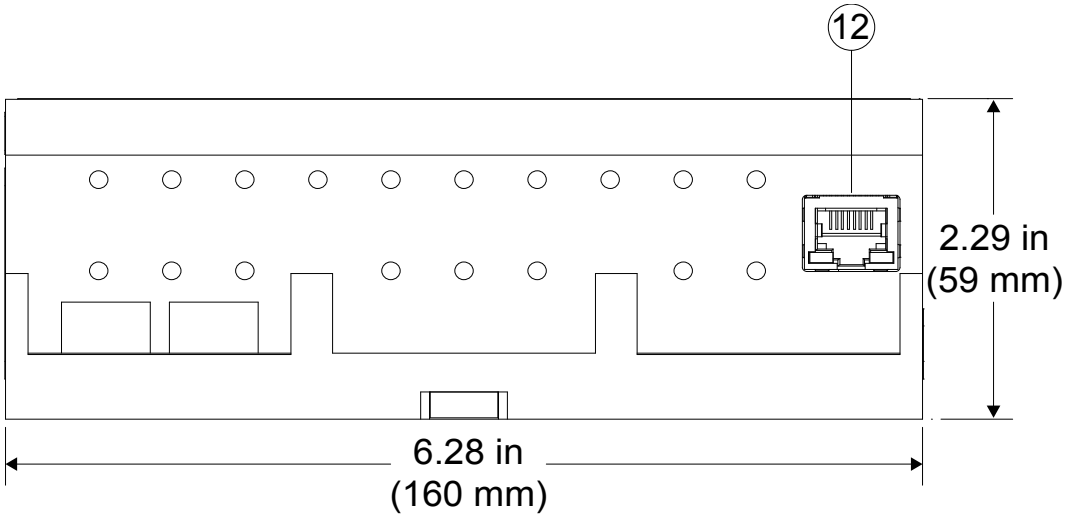
This section provides information on the connections, controls, and indicators available on the DIN-AP3MEX.

DIN-AP3MEX Physical View

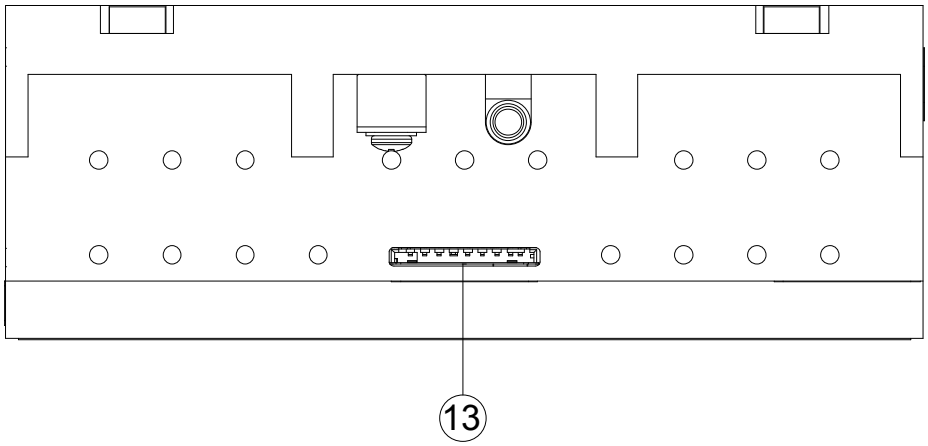
DIN-AP3MEX Overall Dimensions (Front View)



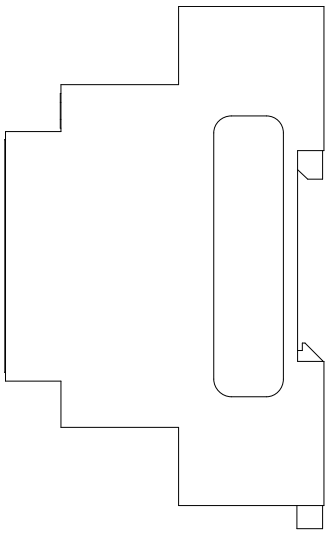
DIN-AP3MEX Overall Dimensions (Bottom View)



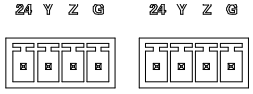
DIN-AP3MEX Physical Drawing (Top View)



DIN-AP3MEX Physical Drawing (Side View)

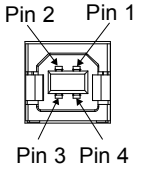
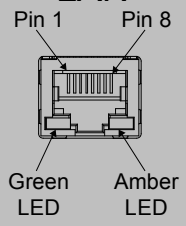


Connectors, Controls, and Indicators

#	CONNECTORS,* CONTROLS, AND INDICATORS	DESCRIPTION
1	PWR LED	Dual-color green/amber LED, indicates operating power supplied from Cresnet network or power supply, turns amber while booting and green when operating
2	NET LED	Amber LED indicates communication with the Cresnet system
3	Ground	Captive screw terminal, chassis ground lug
4	HW-R Button	Recessed miniature push button for hardware reset
5	SW-R Button	Recessed miniature push button for software reset (restarts the SIMPL program)
6	Antenna	Connection for supplied antenna or antenna extender
7	NET – 24 Y Z G 	(2) 4-pin 3.5 mm detachable terminal blocks, paralleled; Cresnet port and 24 volt dc power input Cresnet master port **24**: Power (24 Vdc) **Y**: Data **Z**: Data **G**: Ground
8	MSG LED	Red LED indicates processor has generated an error message

(Continued on following page)

Connectors, Controls, and Indicators (Continued)

<table>
<tr><th>#</th><th>CONNECTORS,* CONTROLS, AND INDICATORS</th><th>DESCRIPTION</th></tr>
<tr><td>9</td><td>ACQUIRE</td><td>Recessed push button with red LED used to set up connections with wireless devices</td></tr>
<tr><td>10</td><td>ACTIVITY</td><td>Red LED indicates wireless communications</td></tr>
<tr><td>11</td><td>COMPUTER
 
</td><td>(1) USB Type B female, USB 2.0 computer console port (6 foot cable included);
For setup only
<table><tr><th>PIN</th><th>DESCRIPTION</th></tr><tr><td>1</td><td>+5 Vdc</td></tr><tr><td>2</td><td>Data -</td></tr><tr><td>3</td><td>Data +</td></tr><tr><td>4</td><td>Ground</td></tr></table></td></tr>
<tr><td>12</td><td>LAN
 
</td><td>(1) 8-wire RJ-45 with 2 LED indicators;
10BASE-T / 100BASE-TX Ethernet port;
Green LED indicates link status;
Amber LED indicates activity
<table><tr><th>PIN</th><th>SIGNAL</th><th>PIN</th><th>SIGNAL</th></tr><tr><td>1</td><td>TX +</td><td>5</td><td>N/C</td></tr><tr><td>2</td><td>TX -</td><td>6</td><td>RX -</td></tr><tr><td>3</td><td>RX +</td><td>7</td><td>N/C</td></tr><tr><td>4</td><td>N/C</td><td>8</td><td>N/C</td></tr></table></td></tr>
<tr><td>13</td><td>MEMORY
 </td><td>(1) SD memory card slot;
Accepts one SD or SDHC card up to 32 GB for memory expansion (SD memory card not included)</td></tr>
</table>

* Interface connectors for the **NET** ports are provided with the unit.

Setup

Network Wiring

When wiring the Cresnet/Ethernet network, consider the following:

- Use Crestron Certified Wire.
- Use Crestron power supplies for Crestron equipment.
- Provide sufficient power to the system.

CAUTION: Insufficient power can lead to unpredictable results or damage to the equipment. Use the Crestron Power Calculator to help calculate how much power is needed for the system (www.crestron.com/calculators).

For networks with 20 or more devices, use a Cresnet Hub/Repeater (DIN-HUB, sold separately) to maintain signal quality.

For more details, refer to "Check Network Wiring" on page 25.

For general information on connecting Ethernet devices in a Crestron system, refer to the Crestron e-Control® Reference Guide (Doc. 6052) at www.crestron.com/manuals.

Identity Code

NOTE: The latest software can be downloaded at www.crestron.com/software.

Net ID

The Net ID of the DIN-AP3MEX has been factory set to **02**. The Net ID is defined as the "Master" control system on the Cresnet network and cannot be changed.

IP ID

The IP ID is set within the DIN-AP3MEX's IP table using Crestron Toolbox. For information on setting an IP table, refer to the Crestron Toolbox help file.

Installation

The DIN-AP3MEX should be used in a well-ventilated area. The venting holes should not be obstructed under any circumstances.

To prevent overheating, do not operate this product in an area that exceeds the environmental temperature range listed in the table of specifications. Consider using forced air ventilation to reduce overheating. Consideration must be given if installed in a closed or multi-unit rack assembly since the operating ambient temperature of the environment may be greater than the room ambient temperature. Contact with thermal insulating materials should be avoided on all sides of the unit.

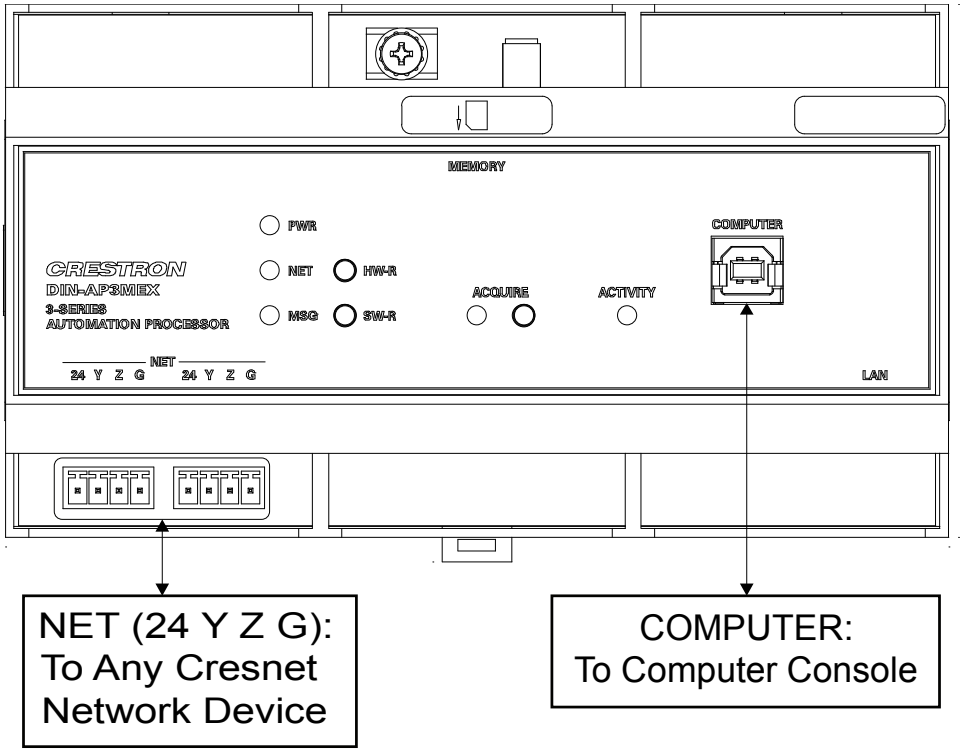
Hardware Hookup

Make the necessary connections as called out in the illustrations that follow. Refer to "Network Wiring" on page 14 before attaching the 4-position terminal block connectors. Apply power after all connections have been made.

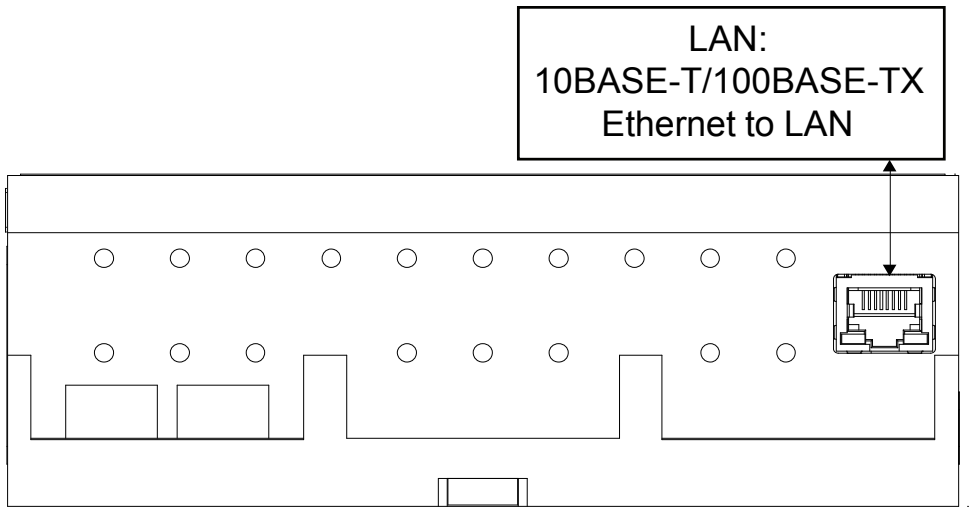
When making connections to the DIN-AP3MEX, note the following:

- Use Crestron power supplies for Crestron equipment.
- The included cable cannot be extended.

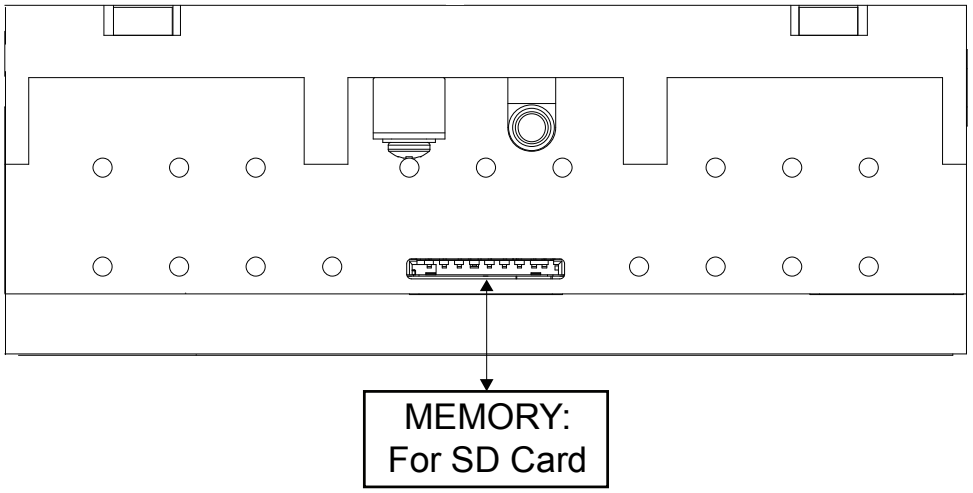
Hardware Connections for the DIN-AP3MEX (Front View)



Hardware Connections for the DIN-AP3MEX (Bottom View)



Hardware Connections for the DIN-AP3MEX (Top View)



NOTE: Ensure the unit is properly grounded by connecting the chassis ground lug to an earth ground (building steel).

NOTE: To prevent overheating, do not operate this product in an area that exceeds the environmental temperature range listed in the table of specifications.

Additional Configuration

The DIN-AP3MEX can be configured from a web browser. For details, refer to "Online Configuration" on page 20.

Uploading and Upgrading

Crestron recommends using the latest programming software and that each device contains the latest firmware to take advantage of the most recently released features. However, before attempting to upload or upgrade it is necessary to establish communication. Once communication has been established, files (for example, programs or firmware) can be transferred to the control system (or device). Finally, program checks can be performed (such as changing the device ID or creating an IP table) to ensure proper functioning.

NOTE: Crestron software and any files on the website are for authorized Crestron dealers and Crestron Service Providers (CSPs) only. New users must register to obtain access to certain areas of the site (including the FTP site).

Establishing Communication

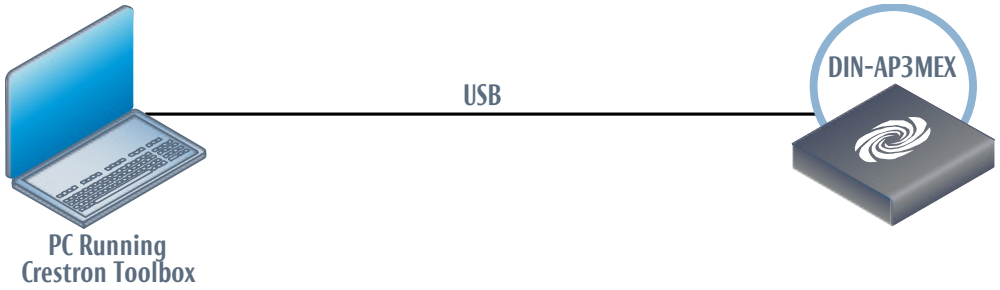
Use Crestron Toolbox for communicating with the DIN-AP3MEX; refer to the Crestron Toolbox help file for details. There are two methods of communication: USB and TCP/IP.

USB

NOTE: Required for initial setup of Ethernet parameters.

NOTE: Required for loading projects and firmware.

USB Communication



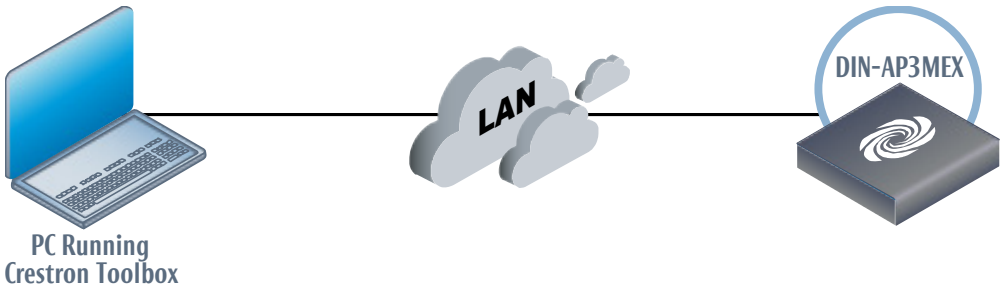
The **COMPUTER** port on the DIN-AP3MEX connects to the USB port on the PC via the included Type A to Type B USB cable:

1. Click **Tools | System Info**.
2. Click the icon.

3. For *Connection Type*, select *USB*. When multiple USB devices are connected, identify the DIN-AP3MEX by entering "DIN-AP3MEX" in the *Model* text box, the unit's serial number in the *Serial* text box, or the unit's hostname (if known) in the *Hostname* text box.
4. Click **OK**. Communications are confirmed when the device information is displayed.

TCP/IP

Ethernet Communication



The DIN-AP3MEX connects to PC via Ethernet:

1. Use the Device Discovery Tool (click the icon) in Crestron Toolbox to detect all Ethernet devices on the network and their IP configuration. The tool is available in Toolbox version 1.15.143 or later.
2. Click on the DIN-AP3MEX to display information about the device.

Programs and Firmware

Program or firmware files may be distributed from programmers to installers or from Crestron to dealers. Firmware upgrades are available from the Crestron website as new features are developed after product releases. One has the option to upload programs via the programming software or to upload and upgrade via the Crestron Toolbox. For details on uploading and upgrading, refer to the Crestron Studio™ help file, SIMPL Windows help file, or the Crestron Toolbox help file.

Crestron Studio / SIMPL Windows

If a Crestron Studio (or SIMPL Windows) program is provided, it can be uploaded to the control system using Crestron Studio (or SIMPL Windows) or Crestron Toolbox.

Firmware

Check the Crestron website to find the latest firmware. (New users must register to obtain access to certain areas of the site, including the FTP site.)

Upgrade DIN-AP3MEX firmware via Crestron Toolbox.

1. Establish communication with the DIN-AP3MEX and display the "System Info" window.
2. Select **Functions | Firmware…** to upgrade the DIN-AP3MEX firmware.

Configure for Operations

Before setting up the DIN-AP3MEX, the time and time zone need to be set. The DIN-AP3MEX can also be further configured using a web browser.

Set Date and Time

1. Establish communication with the DIN-AP3MEX as described in "Establishing Communication" on page 17.
2. In Crestron Toolbox, select **Functions** | **System Clock…**.
3. Set the date and time.

Online Configuration

The DIN-AP3MEX can be configured using the built-in web-based setup tool.

1. Using Internet Explorer, navigate to http://xxx.xx.xx.xxx/setup where xxx.xx.xx.xxx is the IP address of the control system.

   NOTE: The web-based setup tool is only accessible from Internet Explorer.

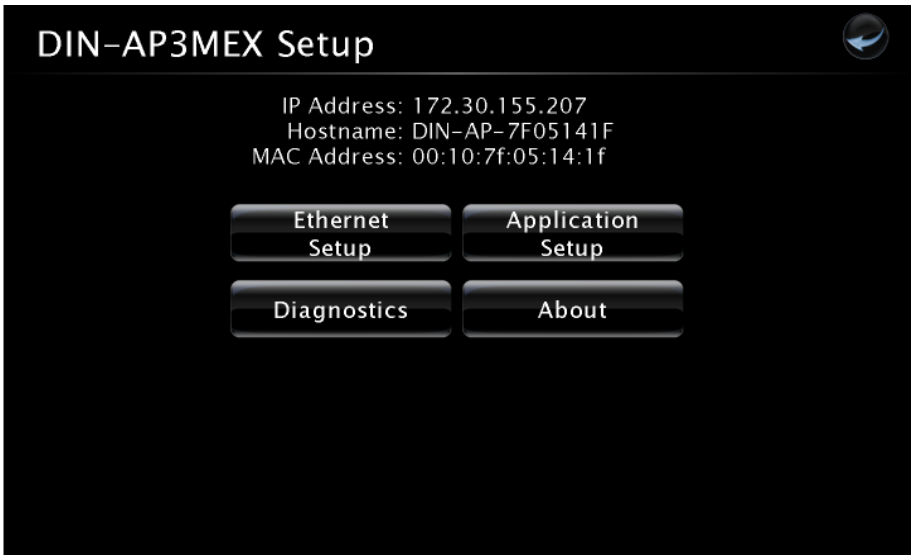
   NOTE: If a security warning is displayed, click **Install** to continue.

   The control system's splash screen is displayed.

Splash Screen

2. Click **Setup** to display the "DIN-AP3MEX Setup" menu.

"DIN-AP3MEX Setup" Menu



The "DIN-AP3MEX Setup" menu displays the IP address, hostname, and MAC address of the device. It also allows access to various setup and programming screens. The "DIN-AP3MEX Setup" menu contains buttons for **Ethernet Setup**, **Application Setup**, **Diagnostics**, and **About**, as shown in the illustration above.

3. Click one of the following options:
   - **Ethernet Setup** – Configures the DIN-AP3MEX's Ethernet settings and displays DHCP, hostname, IP address, subnet mask, default router, domain, and MAC address settings.

     ⇒ Click **Advanced Settings** to specify DNS servers, web server settings, and SSL settings.

     ⇒ Click **MyCrestron Dynamic DNS** to configure the myCrestron.com Dynamic DNS service.

     ⇒ Click **Ethernet Diagnostics** to test Ethernet communications.

     ⇒ Click **Reboot** to reboot the DIN-AP3MEX.
   - **Application Setup** – Selects programs to be loaded on startup and controls which program(s) are running.
   - **Input/Output Control** – Configures the COM ports, operates the relays, and monitors the Versiports.
   - **Diagnostics** – Displays information about the connected devices, hardware configuration, and error logs.
   - **About** – Displays firmware information.
4. Click the icon to return to the previous screen.

Problem Solving

Troubleshooting

The following table provides corrective action for possible trouble situations. If further assistance is required, please contact a Crestron customer service representative.

DIN-AP3MEX Troubleshooting

TROUBLE	POSSIBLE CAUSE(S)	CORRECTIVE ACTION
Device does not function.	Device is not communicating with the network.	Use Crestron Toolbox to poll the network. Verify network connection to the device.
	Device is not receiving power from a Crestron power source.	Use the provided Crestron power source. Verify connections.
	Device is not receiving sufficient power.	Use the Crestron Power Calculator to help calculate how much power is needed for the system.
MSG LED illuminates.	Hardware or software failure.	Verify that hardware configuration matches software configuration. Use Crestron Toolbox to display the error log.

(Continued on following page)

DIN-AP3MEX Troubleshooting (Continued)

TROUBLE	POSSIBLE CAUSE(S)	CORRECTIVE ACTION
Compilation error RLCMCVT166 and RLCMCVT177.	Poor analog versus serial signal definition in the SIMPL Windows program.	Confirm properly defined signal definition in the program.
System locks up.	Various.	Hold down **SW-R** button on control system front panel to bypass program and communicate directly with processor. Refer to "Troubleshooting Communications" in the Crestron 3-Series Control System Reference Guide (Doc. 7150) at www.crestron.com/manuals for more details.
Cresnet device does not respond.	Device not wired correctly.	Verify Cresnet wiring.
	Improper NET ID used.	Verify that device ID matches NET ID in the program.
Loss of functionality due to electrostatic discharge.	Improper grounding.	Check that all ground connections have been made properly.

(Continued on following page)

DIN-AP3MEX Troubleshooting (Continued)

TROUBLE	POSSIBLE CAUSE(S)	CORRECTIVE ACTION
A/V system device does not respond.	IRP2 or serial port not placed properly.	Verify placement of IRP2 (hold phosphor card under IRP2 while pressing button) and tighten serial cables.
	Used wrong IR/serial port.	Verify that proper IR or serial port is defined.
	Serial cable not wired correctly.	Verify that serial cable is wired correctly for RS-232, -422, and -485.
	Device is not receiving sufficient power.	User the Crestron Power Calculator to help calculate how much power is needed for the system.

Check Network Wiring

Use the Right Wire

To ensure optimum performance over the full range of the installation topology, use Crestron Certified Wire only. Failure to do so may incur additional charges if support is required to identify performance deficiencies because of using improper wire.

Calculate Power

CAUTION: Use only Crestron power supplies for Crestron equipment. Failure to do so could cause equipment damage or void the Crestron warranty.

CAUTION: Provide sufficient power to the system. Insufficient power can lead to unpredictable results or damage to the equipment. Use the Crestron Power Calculator to help calculate how much power is needed for the system (www.crestron.com/calculators).

When calculating the length of wire for a particular Cresnet run, the wire gauge and the Cresnet power usage of each network unit to be connected must be taken into consideration. Use Crestron Certified Wire only. If Cresnet units are to be daisy chained on the run, the Cresnet power usage of each network unit to be daisy chained must be added together to determine the Cresnet power usage of the entire chain. If the unit is run from a Crestron system power supply network port, the Cresnet power usage of that unit is the Cresnet power usage of the entire run. The wire gauge and the Cresnet power usage of the run should be used in the following equation to calculate the cable length value on the equation's left side.

Cable Length Equation

$$L < \frac{40{,}000}{R \times P}$$

Where: L = Length of run (or chain) in feet
R = 6 Ohms (Crestron Certified Wire: 18 AWG (0.75 mm^2))
or 1.6 Ohms (Cresnet HP: 12 AWG (4 mm^2))
P = Cresnet power usage of entire run (or chain)

Make sure the cable length value is less than the value calculated on the right side of the equation. For example, a Cresnet run using 18 AWG Crestron Certified Wire and drawing 20 watts should not have a length of run more than 333 feet (101 meters). If Cresnet HP is used for the same run, its length could extend to 1250 feet (381 meters).

NOTE: All Crestron certified Cresnet wiring must consist of two twisted pairs. One twisted pair is the **24** and **G** pair and the other twisted pair is the **Y** and **Z** pair.

Strip and Tin Wire

When daisy chaining Cresnet units, strip the ends of the wires carefully to avoid nicking the conductors. Twist together the ends of the wires that share a pin on the network connector and tin the twisted connection. Apply solder only to the ends of the twisted wires. Avoid tinning too far up the wires or the end becomes brittle. Insert the tinned connection into the Cresnet connector and tighten the retaining screw. Repeat the procedure for the other three conductors.

Add Hubs

Use of a Cresnet Hub/Repeater (DIN-HUB) is advised whenever the number of Cresnet devices on a network exceeds 20 or when the combined total length of Cresnet cable exceeds 3000 feet (914 meters).

Reference Documents

All documents mentioned in this guide are available from the Crestron website.

List of Related Reference Documents

DOCUMENT TITLE
3-Series Control Systems Reference Guide
Crestron e-Control Reference Guide

Further Inquiries

To locate specific information or resolve questions after reviewing this guide, contact Crestron's True Blue Support at 1-888-CRESTRON [1-888-273-7876] or, for assistance within a particular geographic region, refer to the listing of Crestron worldwide offices at www.crestron.com/offices.

To post a question about Crestron products, log onto Crestron's Online Help at www.crestron.com/onlinehelp. First-time users must establish a user account to fully benefit from all available features.

Future Updates

As Crestron improves functions, adds new features and extends the capabilities of the DIN-AP3MEX, additional information may be made available as manual updates. These updates are solely electronic and serve as intermediary supplements prior to the release of a complete technical documentation revision.

Check the Crestron website periodically for manual update availability and its relevance. Updates are identified as an "Addendum" in the Download column.

Return and Warranty Policies

Merchandise Returns / Repair Service

1. No merchandise may be returned for credit, exchange or service without prior authorization from Crestron. To obtain warranty service for Crestron products, contact an authorized Crestron dealer. Only authorized Crestron dealers may contact the factory and request an RMA (Return Merchandise Authorization) number. Enclose a note specifying the nature of the problem, name and phone number of contact person, RMA number and return address.
2. Products may be returned for credit, exchange or service with a Crestron Return Merchandise Authorization (RMA) number. Authorized returns must be shipped freight prepaid to Crestron, 6 Volvo Drive, Rockleigh, N.J. or its authorized subsidiaries, with RMA number clearly marked on the outside of all cartons. Shipments arriving freight collect or without an RMA number shall be subject to refusal. Crestron reserves the right in its sole and absolute discretion to charge a 15% restocking fee plus shipping costs on any products returned with an RMA.
3. Return freight charges following repair of items under warranty shall be paid by Crestron, shipping by standard ground carrier. In the event repairs are found to be non-warranty, return freight costs shall be paid by the purchaser.

Crestron Limited Warranty

Crestron Electronics, Inc. warrants its products to be free from manufacturing defects in materials and workmanship under normal use for a period of three (3) years from the date of purchase from Crestron, with the following exceptions: disk drives and any other moving or rotating mechanical parts, pan/tilt heads and power supplies are covered for a period of one (1) year; touch screen display and overlay components are covered for 90 days; batteries and incandescent lamps are not covered.

This warranty extends to products purchased directly from Crestron or an authorized Crestron dealer. Purchasers should inquire of the dealer regarding the nature and extent of the dealer's warranty, if any.

Crestron shall not be liable to honor the terms of this warranty if the product has been used in any application other than that for which it was intended or if it has been subjected to misuse, accidental damage, modification or improper installation procedures. Furthermore, this warranty does not cover any product that has had the serial number altered, defaced or removed.

This warranty shall be the sole and exclusive remedy to the original purchaser. In no event shall Crestron be liable for incidental or consequential damages of any kind (property or economic damages inclusive) arising from the sale or use of this equipment. Crestron is not liable for any claim made by a third party or made by the purchaser for a third party.

Crestron shall, at its option, repair or replace any product found defective, without charge for parts or labor. Repaired or replaced equipment and parts supplied under this warranty shall be covered only by the unexpired portion of the warranty.

Except as expressly set forth in this warranty, Crestron makes no other warranties, expressed or implied, nor authorizes any other party to offer any warranty, including any implied warranties of merchantability or fitness for a particular purpose. Any implied warranties that may be imposed by law are limited to the terms of this limited warranty. This warranty statement supersedes all previous warranties.

Crestron software, including without limitation, product development software and product operating system software is licensed to Crestron dealers and Crestron Service Providers (CSPs) under a limited non-exclusive, non-transferable license pursuant to a separate end-user license agreement. The terms of this end user license agreement can be found on the Crestron website at www.crestron.com/legal/software_license_agreement.

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